Butler's Gartersnake

Conservation Plan

for the Menards

Oak Creek Development

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1. Background

An expansion of a Menards store in Oak Creek, Wisconsin, is proposed. During regulatory review, the Butler's Gartersnake, *Thamnophis butleri*, a state Threatened Species, was identified as occurring in the project area, and the Wisconsin Department of Natural Resources (WDNR) requires an Incidental Take Authorization to proceed with the development, under the state Endangered Species Law (s. 29.604, Stats.) This statute prohibits the taking of animal species listed as Endangered or Threatened anywhere that they occur in Wisconsin. The law does allow the WDNR, at its discretion, to authorize the taking of individuals of listed species that otherwise is prohibited by the law if the following conditions apply:

a) The taking will not be the purpose of, but will be only incidental to, the carrying out of a lawful activity.
b) The party requesting taking authorization will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking.
c) The taking will not appreciably reduce the likelihood of the survival or recovery of the endangered species or threatened species within the state, the whole plant-animal community of which it is a part, or the habitat that is critical to its existence.
d) The benefit to public health, safety or welfare justifies the activity.

This conservation plan maps existing snake habitat, designates a snake habitat preserve, provides guidelines for managing snake habitat in perpetuity, and details reasonable mitigation efforts to minimize snake mortality during construction.

2. Assessment

2.1 Existing Conditions

Existing snake habitat was mapped following WDNR guidance (Appendix A). The overall existing suitable habitat available on the landscape forms a patch of approximately 38.0 acres (Figure 1). Under current WDNR guidance, a suitable habitat patch of this size is considered to be of Significant Conservation Value (Tier 3) to the Butler's Gartersnake regardless of habitat quality. Approximately 16.6 acres of this habitat patch is within the Menards property boundaries.

2.2 Estimated Habitat Impacts

The proposed project will result in portions of the existing suitable Butler's Gartersnake habitat being occupied by new development and storm water facilities (Figure 2). The proposed project will eliminate approximately 5.8 acres of existing suitable Butler's Gartersnake habitat, and approximately 2.9 acres will be temporarily impacted during construction, and then restored to suitable habitat (Figure 3). Approximately 8.0 acres of existing suitable habitat within the Menards property boundaries will not be impacted during the proposed construction (Figure 3). The resultant reduction of the overall available suitable habitat, from approximately 38.0 acres to approximately 32.2 acres (15.3 % loss), is not expected to jeopardize the overall Significant Conservation Value (Tier 3) rating of the total habitat area, and will result in preserving, and improving the quality and

management of, the remaining habitat within the current Menards property boundaries.

3. Conservation Plan

The project proposes to establish a habitat preserve of approximately 12.2 acres (Figure 3), wherein Butler's Gartersnake habitat would be preserved in perpetuity, by managing and deed restricting approximately 8.0 acres of existing non-impacted habitat, and restoring the approximately 2.9 acres of habitat temporarily impacted during construction. The habitat preserve will be subject to a restoration and management plan (Appendix B). The Conservation Plan is comprised of the following elements.

3.1. Avoid and Minimize

A. The project plans have been adjusted to the maximum extent practicable to avoid disturbance of suitable Butler's Gartersnake habitat.

B. To minimize take, the project proposes to erect snake exclusion fencing at the limits of work as per WDNR guidance. Trenched-in silt fencing will be installed approximately as shown in Figures 4 and 5, by 30 March 2005 (weather permitting), with WDNR snake "turn-arounds" at each end, to prevent snakes from entering the project site once snakes emerge from hibernation. Fences will be inspected three times per week on non-consecutive days, and maintained in good repair, throughout the snake's active period (March 16 - November 5), or until construction ends. Fence maintenance crews will be trained on fence inspection and repair specific to snake exclusion by a consulting herpetologist, and said consultant will periodically spot check fence condition. Repairs will be made within 24 hours of discovery.

C. Snakes will be removed from construction areas prior to construction start, and placed into adjacent habitat to the east of the construction limits of work. The impacted wetlands will be surrounded by silt fencing by 30 March 2005 (weather permitting) to prevent snakes from leaving any overwintering sites within these wetlands. Snakes will then be collected from these areas via visual searches, cover objects, and possibly trapping. Snake removals will continue until snake captures decline and the WDNR authorizes cessation, or 15 July 2005, whichever comes first. The number and species of snakes captured will be reported to the WDNR upon request and in final permit reports. All persons handling snakes will obtain Wisconsin Endangered Species permits where required.

D. Snakes will also be removed from the area on the east side of the storm water pond, where the April 2005 re-design required expansion of the pond area to the east (Figure 3). A new snake exclusion fence will be erected at the new limits of grading, boards will be laid between the old and new fences, and removal surveys will be extended to this area immediately.

3.2 Mitigate

The project proposes a Butler's Gartersnake habitat restoration and management plan with

the following components. The project proponents will commit sufficient funds to contract a reputable restoration ecologist to carry out this habitat plan.

I. The graded areas within the snake habitat preserve (Temporary Habitat Impact Area in Figure 3) will be seeded with an appropriate seed mix, and be established into an appropriate native plant community over 5 years, through an appropriate adaptive management plan (Appendix B).

II. The undisturbed portion of the snake habitat preserve will be enhanced through removal of invasive woody vegetation, as outlined in Appendix B.

III. Parcels within the Final Habitat Preserve (Figure 3) will be protected from development, and, with the exception of the storm water basin (Permanent Habitat Loss area in Figure 3), habitat therein will be managed to maintain suitable habitat for Butler's Gartersnakes, for so long as the snake is listed as a Threatened or Endangered Species. A deed restriction and conservation easement for these parcels, meeting WDNR approval, will be attached to these parcels to accomplish long term protection.

IV. Menards Inc. agrees to maintain as *suitable habitat* (as defined in Appendix A) any portion of the snake habitat preserve it owns for so long as the snake is listed as a Threatened or Endangered Species, by controlling woody vegetation via any of the following methods:

A. Selective Brush/Tree-Cutting: This is the preferred method for small scale, general maintenance. Selective cutting (i.e. hand pruning) may be done without restriction. Herbiciding of cut stems immediately after cutting is recommended as per label instructions (i.e. glyphosate, see also DNR guidelines for herbicide use online).

B. Burning: Fire may be used to manage Butler's Gartersnake habitat with the following restrictions.

1. If burning will be done between November 6 and March 15, there are no restrictions.
2. If burning will be done between March 16 and November 5, then only up to 25% of the available grassland habitat for that site should be burned in any one year, and the following guidance will be used:
   a. Spring: If daytime highs have been regularly below 50º F and/or frost is still evident in the ground, burns in early April may be conducted. To check for frost, a metal probe will be inserted in several places at the wetland/upland interface (just outside the ordinary high water mark) but not in the wetland.
   b. Fall: If daytime highs have been regularly below 50º F for several consecutive days and the day of the burn has similar temperatures (high in 40's) burns may be conducted in October.

C. Mowing/Haying: Herbaceous mowing and brush-mowing may be done as follows:

1. If mowing will be done between November 6 and March 15, there are

no restrictions (for brush, this time frame is generally feasible).

2. If mowing will be done between March 16 and November 5, then:
   a. Mowing will be in small patches in a rotational pattern, with no more than 33% of the available grassland habitat on the site affected in any one year.
   b. Mower blades will be set a minimum of 8 inches off the ground.
   c. Mowing will be conducted when weather conditions are most likely to avoid snake activity:
      (1) During the hottest period of the day when sunny conditions prevail and air temperatures exceed 80 degrees F, OR
      (2) On very cool, overcast days when temperatures are below 50 degrees F.

D. Grazing: Light-to-moderate grazing (<1.0 head per acre) may be used in rotations among habitat patches, with no more than 33% of the available habitat on the site grazed in any one year. Grazing will be discontinued in a patch as soon as 50% of the grasses and forbs in a grazed patch are cropped to 8 inches in height.

4. Figures

This map is not available for public viewing because it contains the location of sensitive Natural Heritage Inventory Data that are exempt from the Wisconsin Open Records Law (s. 23.27 (3)(b) Stats.).

Figure 1: Existing Butler's Gartersnake Habitat. Menards Oak Creek. Casper Consulting, 16 Mar 2005.

This map is not available for public viewing because it contains the location of sensitive Natural Heritage Inventory Data that are exempt from the Wisconsin Open Records Law (s. 23.27 (3)(b) Stats.).

Figure 2: Proposed Development Plan. Menards Oak Creek. Casper Consulting, 7 May 2005.

This map is not available for public viewing because it contains the location of sensitive Natural Heritage Inventory Data that are exempt from the Wisconsin Open Records Law (s. 23.27 (3)(b) Stats.).

Figure 3: Butler's Gartersnake Habitat Impacts. Menards Oak Creek. Casper Consulting, 7 May 2005.

This map is not available for public viewing because it contains the location of sensitive Natural Heritage Inventory Data that are exempt from the Wisconsin Open Records Law (s. 23.27 (3)(b) Stats.).

Figure 4: Butler's Gartersnake Fencing Plan. Menards Oak Creek. Casper Consulting, 7 May 2005.

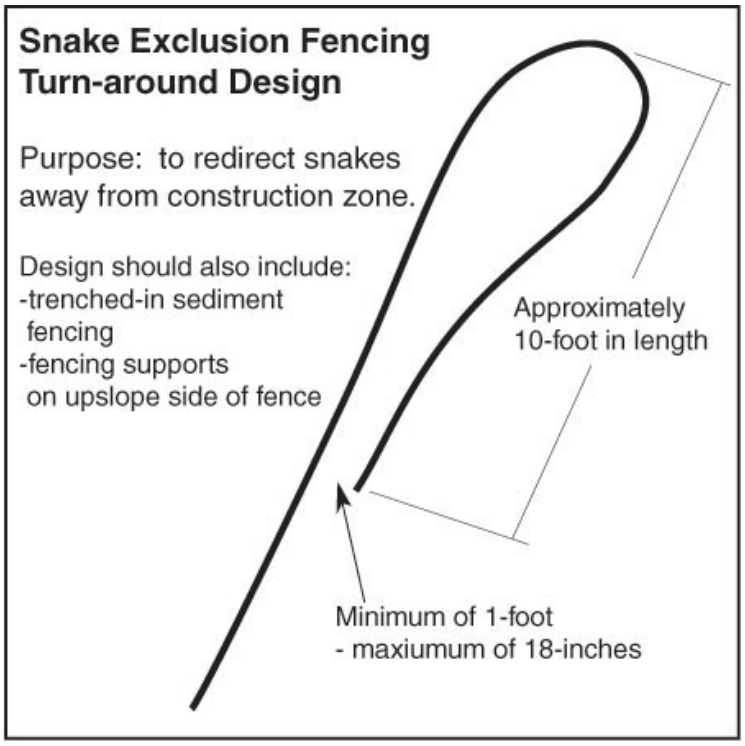

Figure 5: Turn-around design for snake exclusion fence ends

Appendix A

(source: Wisconsin Department of Natural Resources, 6 March 2005
- http://www.dnr.state.wi.us/org/land/er/review/butler/definitions.htm)

Definitions of terms used in the Conservation Strategy for the Butler's gartersnake.

Suitable Habitat Patch:

This is defined as undeveloped areas that include both wetland and adjacent upland habitat. The patch size is not limited to the acreage of the project site only but may continue beyond the project site where suitable habitat is contiguous. To be considered as potential Butler's Gartersnake habitat:

- The wetland habitat may be any classification except permanent open water. Lakes, streams, and deep ponds are not considered suitable, nor are permanent stormwater management ponds. A 100' edge of forested wetland where it abuts or is adjacent to suitable upland habitat is also considered suitable, as crayfish burrows are likely to be present in this habitat.
- The upland habitat must be within 300 feet of over-wintering wetlands AND have intact ground vegetation (grasses, forbs) AND have less than 75% canopy closure. The upland habitat must be directly connected to the wetland in at least one location. Closed canopy forests where ground vegetation is very sparse are not considered suitable, but old fields with significant invasion of woody shrubs and trees is suitable if grasses and forbs are still largely intact. Lawns and fields in active agriculture row crops or in crop rotation are not considered suitable. Fields that remain fallow for more than one year may be considered suitable habitat. Pastures will be included as suitable habitat if more than 50 percent of the acreage had an eight-inch or greater canopy height.

Suitable Habitat Patch:

Poor: Habitat is considered to be poor quality if more than 75% of the wetland habitat component is dominated by dense cattail (*Typha* sp.) beds or dense stands of exotic species (i.e. reed canary grass, *Phalaris arundinacea*; purple loosestrife, *Lythrum salicaria*; giant reed grass, *Phragmites* sp.); and/or more than 75% of the ground cover (grasses and forbs) in the upland habitat component is relatively sparse and likely to become sparser through ongoing natural succession.

Moderate: Habitat is considered to be moderate quality if 50-75% of the wetland habitat component is dominated by dense cattail (*Typha* sp.) beds or dense stands of exotic species (i.e. reed canary grass, *Phalaris arundinacea*; purple loosestrife, *Lythrum salicaria*; giant reed grass, *Phragmites* sp.); and/or 50-75% of the ground cover (grasses and forbs) in the upland habitat component is relatively sparse and likely to become sparser through ongoing natural succession.

Good: Habitat is considered to be good quality if less than 50% of the wetland habitat component is dominated by dense cattail (*Typha* sp.) beds or dense stands of exotic species (i.e. reed canary grass, *Phalaris arundinacea*; purple loosestrife, *Lythrum salicaria*; giant reed grass, *Phragmites* sp.); and/or less than 50% of the ground cover (grasses and forbs) in the upland habitat component is relatively sparse and likely to become sparser through ongoing natural succession.

Isolated:

A site that does not exchange genetic material with other sites, due to being physically separated from other suitable habitat patches. Barriers may include impassable physical structures (paved roads, parking lots, walls), or resistant terrain (mowed lawns, golf courses, forests, agriculture). Resistant terrain is land use that a snake could still physically pass through, but would do so only occasionally, with risk of predation, desiccation, and lack of shelter from the elements. Where resistant terrain connects suitable habitat patches, resistant terrain of over 1000 feet should be considered an impassable barrier.

Appendix B

Habitat Restoration and Management Plan
[attached Cedarburg Science plan]